

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A biomarker for detection of demyelination, characterized in that the biomarker is a polar head group of phosphoglyceride.
2. (Original) A biomarker according to claim 1, wherein said polar head group is phosphatidylethanolamine, phosphatidylcholine, phosphatidylserine and/or phosphatidylinositol, or a part or derivate thereof.
3. (Original) A biomarker, comprising one or more metabolites or parts thereof chosen from the group consisting of N-acetylaspartate, inositol, choline, neopterin, and taurine, and combinations thereof.
4. (Currently Amended) Use of a biomarker according to ~~any one of~~ claims 1-3, for monitoring demyelination.
5. (Currently Amended) Use of a biomarker according to ~~any one of~~ claims 1-3, for diagnosis and prognosis of multiple sclerosis.
6. (Currently Amended) A method for diagnosis and prognosis of demyelination in a mammal, comprising measuring a biomarker according to ~~any one of~~ claims 1-3 in a body fluid of an individual of the respective mammal.
7. (Original) A method according to claim 6, wherein said biomarker is measured by means of proton nuclear magnetic resonance spectroscopic analysis of metabolites in a body fluid and wherein said body fluid is urine.
8. (Original) A difference profile for the detection of demyelination in a mammal, comprising a plurality of spectral line positions and optionally corresponding signal

intensities of NMR spectral lines, which express the normalized difference between one or more NMR spectra of metabolites in a body fluid of one or more healthy individuals of said mammal, and one or more corresponding NMR spectra of metabolites in a corresponding body fluid of one or more individuals of said mammal in which demyelination has been diagnosed.

9. (Original) A difference profile according to claim 8, wherein said mammal has been chosen from the group consisting of humans, dogs and guinea pigs.

10. (Currently Amended) A difference profile according to claim 8 ~~or~~ 9, wherein said body fluid is urine.

11. (Original) A difference profile according to claim 10, comprising the spectral lines and values corresponding thereto according to Table 1.

12. (Currently Amended) A method for the detection of demyelination in a mammal, comprising the steps of providing an NMR spectrum of metabolites in a body fluid of an individual of said mammal in which demyelination is suspected and comparing said NMR spectrum with a difference profile according to ~~any one of~~ claims 8-11, determined for a corresponding body fluid.

13. (Original) A method according to claim 12, wherein said mammal has been chosen from the group consisting of humans, dogs and guinea pigs.

14. (Currently Amended) A method according to claim 12 ~~or~~ 13, wherein said body fluid is urine.

15. (Original) A method for manufacturing a difference profile for the detection of demyelination in a mammal, comprising the steps of: a) providing a first set of positions and corresponding signal intensities of spectral lines in a NMR spectrum recorded from metabolites in a body fluid of one or more healthy individuals of said mammal; b) providing a second set of positions and corresponding signal intensities of spectral lines in a NMR spectrum recorded from metabolites in a corresponding body fluid of one or more individuals of said mammal in which demyelination has been diagnosed; and c) detecting the

differences between the normalized values of said first and second set, for obtaining said difference profile.

16. (Original) A method according to claim 15, wherein the determination of said normalized values comprises the use of the method according to WO 02/13228.

17. (Currently Amended) A method for identifying a biomarker for demyelination, comprising manufacturing a difference profile according to ~~any one of~~ claims 8-11 and identifying a metabolite which is characterized by one or more defined spectral lines in said difference profile.